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The 'Non-Darwinian' Revolution and the Great Chain of Musical Being

Bennett Zon

Introduction

Like all aspects of Victorian culture, musical culture absorbed and reflected prevailing currents in evolutionary thought. Evolutionary paradigms entered the bloodstream of Victorian musical culture largely through the writings of Herbert Spencer, followed some years later by Darwin. Contrary to general opinion, it was not Spencer who formulated the earliest evolutionary theory of musical origins but the musical polymath Joseph Goddard (1833–1911), a prolific, if forgotten, philosopher, composer and bookseller, who in March 1857 published a serialized set of articles in *The Musical World* under the title 'The Moral Theory of Music'.¹ Pipped at the post, Spencer's arguably more famous and influential article 'The Origin and Function of Music'² followed swiftly in the October issue of *Fraser's Magazine* that same year, unapologetically replicating many of Goddard's ideas.³ Darwin had mused on music from his earliest experiences as a naturalist, especially in relation to birdsong, but it was in his posthumously published *Essay of 1844* that he drew upon his

¹ Joseph Goddard, 'The Moral Theory of Music', *The Musical World* 40 (1857): 148–9, 164–5, 181–2, 196–7, 221–2, 237–8, 427–8, 269, 279, 293, 310–11.

² Herbert Spencer, 'The Origin and Function of Music', *Fraser's Magazine* (October 1857), in Herbert Spencer, *Literary Style and Music* (London: Watts, 1950), 45–76.

³ Joseph Goddard, *Reflections upon Musical Art Considered in its Wider Relations* (London: Weekes & Co.), 1893, 6–7.

Beagle notebooks and advanced a functional theoretical prototype for the origins of music.⁴

This would emerge more fully developed in *The Descent of Man* (1871) and *The Expression of the Emotions in Man and Animals* (1872), fuelling popular debate over the validity of Spencer's own indisputably hegemonic theory of musical origins.

Spencer and Darwin's theories could not have been more different, but one had a distinct environmental advantage, as this essay aims to prove. Steeped in the comforting predictabilities of recapitulatory theory, Spencer's theory of musical origins won out in the Victorian struggle for survival, and though Darwin's theory gradually amassed support amongst musicologists, it never managed to supplant its rival. In so many respects Victorian musical culture is the perfect illustration of what Peter Bowler describes as the non-Darwinian revolution, dividing the world into pseudo-Darwinians and anti-Darwinians.⁵ But if a non-Darwinian revolution orbits Darwinian ideas then Victorian musical culture can be considered only partially non-Darwinian – possibly even 'non non-Darwinian' – for while some musicologists selectively interacted with Darwin, others simply ignored him. Indeed, almost all of Victorian musical culture comprises two types of evolutionists, what I call A-Darwinians and pick-'n'-mix Darwinians. A-Darwinians remained card-carrying Spencerians; the pick-'n'-mix variety harvested what they could from Darwin, usually without shedding any of their confirmed Spencerian beliefs. This essay explores and explains that ideological division in Victorian musical culture, beginning with a brief overview of current literature, a study of recapitulation and an examination of its influence on Spencer's musical ideas. Two

⁴ Charles Darwin, *Essay* (1844), in Francis Darwin, ed., *The Foundations of The Origins of Species: Two Essays written in 1842 and 1844* (Cambridge: Cambridge University Press, 1909), 92–3.

⁵ Peter J. Bowler, *The Non-Darwinian Revolution: Reinterpreting a Historical Myth* (Baltimore and London: The Johns Hopkins University Press, 1988), 72–104 *passim*.

sections follow, 'a-Darwinism' and 'pick-'n'-mix Darwinism', interrogating representative musicological samples for their respective evolutionary convictions, and a final section offers concluding remarks and suggestions for future research.

Current Literature

Generally speaking, Victorian musical culture embraced their brave new evolutionary world, but not in its Darwinian incarnation. Curiously, Victorian musicologists resisted Darwin's dangerous idea, effectively committing musical culture to an increasingly superannuated, ideologically developmental future well into the next century. Current scholarship reflects this resistance in its Spencerian, if not fully fledged non-Darwinian, revolutionary orientation. Though still in its nascence, the study of evolution in Victorian music covers a wide range of topics, mostly relating music and Victorian literary culture through writings in fiction, poetry, history, biography, education, philosophy, theology and ethnomusicology.⁶ Of these genres fiction and poetry have attracted most widespread interdisciplinary interest, with books like Phyllis Weliver's *Women Musicians in Victorian Fiction, 1860–1900*:

Representations of Music, Science and Gender in the Leisured Home (2000) and *The Figure of*

⁶ Since the 1950s Victorian music studies have gained in popularity, producing a sizeable corpus of scholarship.

For representative samplings of Victorian music studies see the Ashgate book series *Music in Nineteenth-Century Britain* (Bennett Zon, General Editor). This covers the field in microcosm, including aspects of aesthetics; analysis; biography; church, liturgical and sacred music; cities and provinces; colonialism, imperialism and orientalism; composers; concert venues and promoters; criticism, theory and the press; domestic music making; gender studies; instrumental and vocal music; repertoire studies; institutions and societies; instruments; technology and science; literature and poetry; local history; pedagogy; performers; publishing; and reception history.

Music in Nineteenth-Century British Poetry (2005); Delia da Sousa Correa's *George Eliot, Music and the Victorian Culture* (2003); Sophie Fuller and Nicky Losseff's *Music in Victorian Fiction* (2004); Ruth Solie's *Music in Other Words: Victorian Conversations* (2004) and Claire Mabilat's *Orientalism and Representations of Music in Nineteenth-Century British Popular Arts* (2008). Inevitably certain Victorian authors of fiction dominate attention owing to their profoundly evolutionary frame of mind, such as George Eliot in fiction and Browning or Tennyson in poetry. By necessity books about these authors often struggle to disentangle Spencerian and Darwinian perspectives which were themselves frequently aggregated in common practice. In *Women Musicians in Victorian Fiction, 1860–1900*, for instance, the musicologist and literary theorist Phyllis Weliver, defines Eliot's *The Mill on the Floss* (1860) in Darwin's language of natural selection, yet resolves key narratological dissonances through reference to Spencer and contemporary recapitulational thought.⁷ This mixture spells trouble for theorists of fiction trying to distinguish the role music plays in evolutionary narratives of social context (as Darwinian sexual selection) from descriptions of the music itself (as Spencerian impassioned speech). Ruth Solie's exploration of *Daniel Derronda* confronts – even embraces – the intractable nature of the problem; as she says, 'From her early coupling of unprescient tadpoles and musical pleasure to the end of her life, George Eliot thought about development, evolution and music together.'⁸

Musicologists have tended to wrestle with fewer critical difficulties than literary theorists, preferring the possibly safer musicological option of focussing on musical meaning

⁷ See Phyllis Weliver, *Women Musicians in Victorian Fiction, 1860–1900: Representations of Music, Science and Gender in the Leisured Home* (Aldershot: Ashgate, 2000), 184–205.

⁸ Ruth A. Solie, "'Tadpole Pleasures': Daniel Derronda as Music Historiography', *Music in Other Words: Victorian Conversations* (Berkeley and Los Angeles: University of California Press, 2004), 186.

and the developmental and evolutionary ideas embedded within Victorian musical composition. Michael Allis's *Parry's Creative Process* (2003) and *British Music and Literary Context: Artistic Connections in the Long Nineteenth Century* (2012) are good examples, as are Catherine Dale's *Music Analysis in Nineteenth- and Early Twentieth-Century Britain* (2002) and Michael Spitzer's 'Tovey's evolutionary metaphors' (2005). Like Allis, Jeremy Dibble covers Parry and evolutionism in his *C. Hubert H. Parry: His Life and Music* (1992) and 'Parry as historiographer' (1999), but only from a purely historiographical angle, tracing Parry's evolutionism through some of his well-known historical writings. In this way Dibble's writings are not dissimilar to my own, though my research extends far beyond Parry. To all intents and purposes it is *Music and Metaphor in Nineteenth-Century British Musicology* (2000) which first locates evolutionary paradigms within broader musical contexts, placing them within the larger conceptual arena of a budding musicological profession. Surveying the interplay of anthropological, historical and psychological literature, *Representing Non-Western Music in Nineteenth-Century Britain* (2007) expands into areas of Orientalism, exoticism and musical otherness and traces the influence of monogenism, polygenism, developmentalism, recapitulation and evolutionism on the rise of British ethnomusicology. Many articles complete a picture of Victorian musical culture suffused in evolutionary thought, encompassing education, spirituality, national identity, studies of genius and psychology.⁹ That picture is substantially developed by the current essay, which is the first

⁹ See Bennett Zon: 'Recapitulation and the Musical Education of Victorian Children: *The Child's Pianoforte Book* (1882) by H. Keatley Moore', in Bennett Zon, ed., *Music and Performance Culture in Nineteenth-Century Britain: Essays in Honour of Nicholas Temperley* (Farnham: Ashgate, 2012), 299–321; "'Spiritual Selection": Joseph Goddard and the Music Theology of Evolution', in Martin Clarke, ed., *Music and Theology in Nineteenth-Century Britain* (Farnham: Ashgate, 2011), 215–35; 'Histories of British Music and the Land Without Music:

in the history of science or Victorian music studies to test, debate and problematize the theoretical premise of the non-Darwinian revolution through an examination of Victorian musical culture.

Recapitulation

There must be a reason – above and beyond the sheer multiplicity of competing Victorian evolutionary theories – which explains why current musical scholarship tends to paint a non-Darwinian, or even Spencerian, picture of Victorian musical literature. As Peter Bowler says, ‘Darwin converted the scientific world to evolutionism, but not to Darwinian evolutionism’,¹⁰ i.e., that the theory of natural selection was not the only mechanism accepted as the explanation for evolution. Gillian Beer hints at an answer when citing George Eliot’s *Middlemarch* as a Victorian exemplar of ‘congruity between semantics and form’, in which formal structure *is* and *depicts* (or represents) experimental science: ‘Eliot opens *Middlemarch* by presenting it as a series of experiments designed to study “the history of

National Identity and the Idea of the Hero’, in Emma Hornby and David Maw, eds, *Essays on the History of English Music: Style, Performance, Historiography* (Woodbridge: Boydell & Brewer, 2010), 311–24; ‘The evolution of C. Hubert H. Parry’s *Evolution of the Art of Music*’, *Victorian Review* 35/1 (2009), 68–72; ‘From Great Man to Fittest Survivor: Reputation, Recapitulation and Survival in Victorian Concepts of Wagner’s Genius’, *Musicae Scientiae* (2009–10), 415–45; and “‘More Than the Sum of the Life of its Several Parts’: Individual Differences in the Psychology and Ethnomusicology of C. S. Myers’, *Nineteenth-Century Contexts* (Winter 2007), 373–88.

¹⁰ Bowler, *Non-Darwinian Revolution*, 47.

man”: “how the mysterious mixture behaves under the varying experiments of Time”.¹¹ As with other arts of the day, knowledge and understanding of Victorian music was disseminated and interpreted through the models of literary genres. Writers of inherently difficult musical subjects like acoustics, philosophy and aesthetics, strove to simplify and popularize in much the same manner described by Bernard Lightman of Victorian science,¹² through publications, the press and sites of public and private musical interest. But unlike those working with more accessible topics, they tended to write in forms wanting in narrative, teleological structure – forms which, crucially, fail to marry semantics and form. W. H. Stone’s contribution to Novello, Ewer and Co.’s enormously popular Music Primers series is a case in point. Like so many of its counterparts in this and other similar music series *The Scientific Basis of Music* (1878) aims ‘first, to describe, with as little technical complication as possible, the chief outlines of the subject treated; the second, to furnish reference for more advanced study’.¹³ Sedley Taylor’s *Sound and Music: A Non-Mathematical Treatise on the Physical Constitution of Musical Sounds and Harmony* (1873) and the contemporary translation of Pietro Blaserna’s influential *The Theory of Sound in its Relation to Music* (1876) follow much the same approach. Writings such as these may even be regarded as ‘technical’ literature, covering educational, metaphysical or psychological manuals, treatises and occasional papers. As these show – and at the risk of reopening a stale argument (what Stephen Jay Gould calls ‘the misconceived gap between science and

¹¹ Gillian Beer, *Darwin’s Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 2nd edition (Cambridge: Cambridge University Press, 2000), 148.

¹² See Bernard Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago and London: University of Chicago Press, 2007).

¹³ W. H. Stone, *The Scientific Basis of Music* (London: Novello, Ewer and Co., 1878), 3.

humanities')¹⁴ – it can be argued that Victorian musical culture produced literature increasingly divided into two kinds of form: those *with* and those *without* chronological narrative; literature, in other words, fulfilling or forsaking the cathartic experience of narrative, its convergence between semantics and form, and importantly, its ability to *be* what it *depicts*.

The idea of *being* what one *represents* enjoyed a long pedigree in German idealist thought, and found special pride of place in Victorian national self-identity. Culminating in the mid-century works of Ernst Haeckel, and saturating Victorian literature in a Spencerian mindset, recapitulation fuelled British political, technological and economic imagination. In musical literature genres favouring this frame of mind thrived in a cultural environment where the simplified, a-linear structures of more technical literature did not. If, because of this essentially Victorian aesthetic preference, technical types of musical literature struggled to compete more widely within Victorian culture – and therefore proselytise on behalf of new science – unalienating literary genres like history and biography conversely attracted huge popularity. These genres fed the insatiable Victorian appetite for writings of life and works. Expressed in largely Spencerian terms of development and recapitulation, these genres *are* almost invariably what they *depict*, representing individual evolutionary (or more often developmental) processes through predominantly recapitulatory narratives. It is here within the often mixed historical and biographical imagination that the model

¹⁴ See Stephen Jay Gould, *The Hedgehog, the Fox, and the Magister's Pox: Mending and Minding the Misconceived Gap Between Science and the Humanities* (London: Vintage, 2003).

convergence of semantics and form appears within an evolutionary framework, in what John Lewis Gaddis identifies as the 'structure and process' of the literary historical mechanism.¹⁵

In its axiomatic form recapitulation enshrines the principle that ontogeny recapitulates phylogeny: according to Ernst Haeckel 'Ontogeny is the short and rapid recapitulation of phylogeny . . . During its own rapid development . . . an individual [embryo] repeats the most significant changes in form evolved by its ancestors during their long and slow paleontological development.'¹⁶ In simple terms this means that the growth of the individual (ontogeny) recapitulates the growth of the species (phylogeny), so that the human embryo passes in gestation through successive stages of evolution, from protozoa to invertebrate and vertebrate to mammal. Spencer inflected this with the earlier morphology of Ernst von Baer, from whose writing he extracted the principle of increased differentiation and integration. According to von Baer, development is a continual process of progression from simplicity to complexity: 'Less general characters are developed from the most general, and so forth, until finally the most specialized appear.'¹⁷ The combination of von Baer and Haeckel was a hit with Victorian readers, partly because it gratified their teleological needs

¹⁵ John Lewis Gaddis, *The Landscape of History: How Historians Map the Past* (Oxford et al: Oxford University Press, 2002), 35.

¹⁶ Ernst Haeckel (*Generelle Morphologie des Organismen*, 2 vols (Berlin: Georg Reimer, 1866), vol. 2: 300), cited in Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge MA and London: The Belknap Press of Harvard University Press, 1977), 76–7.

¹⁷ Ernst von Baer (*Ueber der Verhältniss der Formen, die das Individuum in den verschiedenen Stufen seiner Entwicklung annimmt* (1828, part five of *Über Entwicklungsgeschichte der Thiere: Beobachtung und Reflexion*, 1828–37), cited in A. L. Panchen, *Classification, Evolution, and the Nature of Biology* (Cambridge: Cambridge University Press, 1992), 20.

and partly because it appealed to their historically gathered sense of human entitlement.¹⁸ Not satisfied with conquering *nations* of the world, the Victorians conquered *time* as well, becoming the physical embodiment and evolutionary apogee of history. They *were* what they *represented*: semantics and form, individual and species, ontogeny and phylogeny. They were the living representation of what is called the Great Chain of Being, a recapitulatory ladder of development which 'linked all forms of creation in a finely graduated hierarchical series'.¹⁹

The Great Chain of Musical Being

Recapitulation embodied in the Great Chain of Being resonates throughout Victorian musical culture. In the larger context of Spencer's synthetic philosophy, music plays arguably only a passing role, appearing briefly in *Social Statics* (1851) and *Principles of Psychology* (1855). These coalesce in 'The Origin and Function of Music', 'The Origin of Music' (1890), and numerous musicological essays found in *Facts and Comments* (1902), including 'The Corruption of Music', 'Developed Music', 'Meyerbeer' and 'Some Musical Heresies'. In *First Principles* (1862) and elsewhere in his synthetic philosophy, Spencer locates music in the context of 'The Knowable' (scientific knowledge), and as such a progression from 'The Unknowable' (religious knowledge). At its most rudimentary level music operates as simple

¹⁸ As an avatar of evolutionism Haeckel, in particular, was immensely popular across Europe and other parts of the world: 'Haeckel would become the foremost champion of Darwinism not only in Germany but throughout the world.' (Robert J. Richards, *The Tragic Sense of Life* (Chicago and London: University of Chicago Press, 2008), 2).

¹⁹ George W. Stocking, *Victorian Anthropology* (New York: The Free Press, 1987), 11.

rhythm – a single string bowed on the violin, for example. At a higher level it becomes compound rhythm: ‘the antagonism and coincidence of primary rhythms producing a secondary rhythm – is seen in the “beats” of two notes of music’.²⁰ These, like all other phenomena, ‘are truths which unify concrete phenomena belonging to all division of Nature; and so must be components of that complete, coherent conception of things which Philosophy seeks’.²¹ Accordingly,

rhythm in speech, rhythm in sound, and rhythm in motion, were in the beginning, parts of the same thing, and have only in the process of time become separate things. The advance from the homogeneous to the heterogeneous is displayed not only in the separation of these arts from each other and from religion, but also in the multiplied differentiations which each of them afterward undergoes. Taking music for example, without pointing out in detail the increasing complexity that resulted from introducing notes of various lengths, from the multiplication of keys, from varieties of time, from modulations and so forth, it needs but to contrast music as it is, with music as it was, to see how immense is the increase of heterogeneity.²²

Building upon this recapitulatory model, Spencer advances a theory of music originating in human, impassioned speech:

²⁰ Herbert Spencer, *First Principles* (London: Williams and Norgate, 1867), chapter 10, section 82, http://oll.libertyfund.org/index.php?option=com_staticxt&staticfile=advanced_search.php, accessed 27/9/12.

²¹ Spencer, *First Principles*, chapter 11, section 89.

²² Spencer, *First Principles*, chapter 15, section 126, Herbert Spencer, in F. Howard Collins, *An Epitome of The Synthetic Philosophy* (London: Williams and Norgate, 1889), 42.

vocal peculiarities which indicated excited feeling *are those which especially distinguish song from ordinary speech*. Every one of the alterations of voice which have found to be a physiological result of pain or pleasure *is carried to an extreme in vocal music . . . in respect alike of loudness, timbre, pitch, intervals, and rate of variation*, song employs and exaggerates the natural language of the emotions; it arises from a systematic combination of those vocal peculiarities which are physiological effects of acute pleasure and pain.²³

From its origins in impassioned speech music develops historically in the following way:

In music progressive integration is displayed in numerous ways. The simple cadence embracing but a few notes, which in the changes of savages is monotonously repeated, becomes, among civilized races, a long series of different musical phrases combined into one whole; and so complete is the integration that the melody cannot be broken off in the middle nor shorn of its final note, without giving us a painful sense of incompleteness. When to the air, a bass, a tenor, and an alto are added; and when to the different voice-parts there is joined an accompaniment; we see integration of another order which grows naturally more elaborate. And the process is carried a

²³ Herbert Spencer, 'The Origin and Function of Music', *Fraser's Magazine* (Oct. 1857), in *Literary Style and Music: Including Two Short Essays on Gracefulness and Beauty* (New York: Philosophical Library, 1951), 57–8.

stage higher when these complex solos, concerted pieces, choruses, and orchestral effects are combined into the vast ensemble of an oratorio or a musical drama.²⁴

True to his synthetic philosophy, Spencer translated musical origins into a developmental anthropology at home with the Great Chain of Being. At its most rudimentary level are savages, with their monotonous, barely evolved 'dance-chants' akin to the earliest expressions of man;²⁵ in sharp contrast is civilized, Western (presumably English) man, confident in the incontestable superiority of his canonic Western music. As Figure 1 illustrates, Spencer's Great Chain of Musical Being tells us even more than we think because it operates on two levels simultaneously – as an ontogenic history of music and a phylogenic history of man. Music recapitulates man; and as a theory it *is* what it *represents* – the perfect Victorian convergence of semantics and form.

[Figure 1]

Spencer's Musical Chain recapitulates more than meets the eye because his synthetic philosophy attributes universal evolutionary principles of form to all organic and inorganic matter. Thus, ancestral Victorian teleologies bubble away, deep beneath the progressive

²⁴ Herbert Spencer, 'The Law of Evolution', *First Principles*, 2nd edition (London: Williams and Norgate, 1867), IXV/§114,

http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=1390&chapter=99228&layout=html&Itemid=27, accessed 13/9/12.

²⁵ Spencer, 'Origin and Function', 68.

rhetorical surface of the Great Chain. Culture progresses invariably from the emotional to intellectual; from East to West; from nature to man; and child to adult; and echoing this pattern, music history progresses from language to music; sound to music; and often rhythm to melody, harmony and tonality.

Spencer formulated his theories of evolution in the 1850s, culminating in his 1857 essay 'Progress: Its Law and Cause', published the same year as 'The Origin and Function of Music' and just two years before *The Origin of Species*. Bowler ascribes to this essay influential, yet transitional status in progress towards Darwin: it is 'the basis for a new understanding of mankind's place in nature . . . that mankind's cosmic significance arises from its position at the cutting edge of natural progress'.²⁶ Rooted in classical notions of progress, this new understanding of the recapitulatory Chain also incubates neo-Lamarckian concepts of adaptation ideally suited to analogize the history of musical development. Writing in 'Developed Music', Spencer compares musical development to the evolution of bird feathers: feathers, he suggests,

were originally protective . . . [for] the preservation of heat. Passing over cases in which colours that aid concealment are acquired, we see that very generally colours subserve the end of increasingly attractiveness: an end superposed on, and quite unlike the original end . . . they are all modifications of protective appendages. Their secondary characters have disguised and almost obliterated their primary ones. In like manner, then, it has happened that out of phrases and cadences of emotional utterance – some expressing exhilaration and other expressing more special feelings – there have been evolved in the course of ages musical combinations, some

²⁶ Bowler, *Non-Darwinian Revolution*, 64.

characterized by idealized forms of such phrases and others showing no apparent relation to such phrases; but all of them woven into gorgeous compositions differing from their rudiments as much as the plumage of a king fisher differs from that of a sparrow.²⁷

Attractively transmutational in nature, Spencer's brand of historical emplotment appealed to a readership which wanted its cake (progress) and eat it too (adaptation). Bowler concedes: 'Spencer's great conceptual advance was to realize that . . . the basic process of adaptation functions within a system whose overall structure guarantees eventual progress.'²⁸ For musical audiences not yet exposed to Darwinian evolution, Spencer's neo-Lamarckian recapitulationism hit the progressive nail on the adaptive head, and while the rest of Victorian culture would soon recoil from the impact of *The Origin of Species*, musical culture remained seemingly unmoved for almost another twenty years. It was not until the 1870s that Darwin finally came to formulate advanced theories of musical origins, and only in the following decade that the Cambridge music philosopher and psychologist Edmund Gurney (1847–1888) published his magisterial *Power of Sound* (1880), music's first systematic response to Darwinian evolutionism. In the absence of debate Spencer and his Great Chain reigned supreme, the unchallenged master of the Victorian musical universe, and in the music-evolutionary vacuum, recapitulationism grew long roots – so deeply rooted that Victorian musical culture became not simply non-Darwinian, but a-Darwinian.

²⁷ Herbert Spencer, 'Developed Music', in *Facts and Comments* (London: Williams & Norgate, 1902/1907), 56–7.

²⁸ Bowler, *Non-Darwinian Revolution*, 65.

A-Darwinism

Though Darwin developed his theory of musical origins in 1844 he did not publish it until 1871 in *The Descent of Man*, arriving at a thesis entirely opposite to that of Spencer. Where Spencer argues that music arose from impassioned speech (i.e., language precedes music), Darwin sees it as a separate, earlier evolutionary function of sexual selection (i.e., music precedes language):

when vivid emotions are felt and expressed by the orator or even in common speech, musical cadences and rhythm are instinctively used. Monkeys also express strong feelings in different tones – anger and impatience by low, – fear and pain by high notes. The sensations and ideas excited in us by music, or by the cadences of impassioned oratory, appear from their vagueness, yet depth, like mental reversions to the emotions and thoughts of a long-past age. All these facts with respect to music become to a certain extent intelligible if we may assume that musical tones and rhythm were used by the half-human progenitors of man, during the season of courtship, when animals of all kinds are excited by the strongest passions. In this case, from the deeply-laid principle of inherited associations, musical tones would be likely to excite in us, in a vague and indefinite manner, the strong emotions of a long-past age. Bearing in mind that the males of some quadrumanous animals have their vocal organs much more developed than in the females, and that one anthropomorphous species pours forth a whole octave of musical notes and may be said to sing, the suspicion does not appear improbable that the progenitors of man, either the males or

females, or both sexes, before they had acquired the power of expressing their mutual love in articulate language, endeavoured to charm each other with musical notes and rhythm.²⁹

With Darwin's musical ideas finally circulating in the public domain, interest in his theory began to gather, not least because it offered the first substantial challenge to Spencer. Edmund Gurney was on to it like a flash when he thought it could be used to hammer Spencer into the ground, which he does unrelentingly in 'The Speech Theory' chapter of *The Power of Sound*, as well as in later, publicly aired rebukes: 'I have opposed to the utmost Mr. Spencer's view'³⁰ he opines. In fact most of Gurney's contemporaries were far more interested in the evolutionarily conflicted scientist Hermann von Helmholtz than Darwin,³¹ especially acousticians enjoying the first English translation of his work *On the Sensations of Tone as a Physiological Basis for the Theory of Music* (1875). Sedley Taylor spells it out on the cover of *Sounds and Music: A Non-Mathematical Treatise on the Physical Constitution of Musical Sounds and Harmony, Including the Chief Acoustical Discoveries of Professor Helmholtz* (1873). William Pole's *The Philosophy of Music* (1879) provides another

²⁹ Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2 vols (London: John Murray, 1871), vol. 2, 336–7.

³⁰ Edmund Gurney, *Mind* 7/25 (Jan. 1882), 95.

³¹ Timothy Lenoir, *The Strategy of Life: Teleology and Mechanics in Nineteenth-Century German Biology* (Chicago and London: University of Chicago Press, 1982/89), 237. According to Lenoir, 'Helmholtz championed the view that Darwin had explained biological adaptation as the result of a blind law of nature, rather than as the manipulation of a pre-programmed and untestable original purposive organization. The "law of nature" he attributed to Darwin here, however, was not natural selection, rather Helmholtz referred to "the law of transmission of individual characteristics from parents to offspring".'

good, if less overt illustration. Eclipsed by Helmholtz's 'wow' factor; attacked indirectly by some not-insignificant national and international criticism of Gurney;³² and unpopular with died-in-the-wool recapitulationists, Darwin's musical theory struggled to survive in the neo-Lamarckian environment of Victorian musical culture. While Darwin's theory struggled to adapt, however, Spencer's Great Chain of Musical Being went from strength to strength.

Evidence of a-Darwinism is abundant in the historical literature of the time, but arguably begins with proto-ethnomusicologist, Carl Engel (1818–1882). From the 1860s Engel wrote extensively on national music, both ancient and modern, contributing the first musical entry to the seminal anthropological field book *Notes and Queries on Anthropology* (1874). Engel was a developmentalist with a difference, eager to overcome the trenchantly racist anthropologies of his time. Writing of Assyrian music he debunks the myth of historical degeneration:

If we were to consider it [Assyrian music] from the level of our own highly cultivated music, starting with the assumption that the musical system of the Assyrians must have been similar to our own, though less perfect – that they possessed scales and rhythmical constructions similar to ours, though probably much more incomplete – that their musical compositions must have been the less good the less they resembled the compositions of Mozart and Beethoven – if we were to commence with our

³² Bennett Zon, *Representing Non-Western Music in Nineteenth-Century Britain* (Rochester NY: University of Rochester Press, 2007), 181.

inquires from this one sided pointed of view, we should be led to partial and unsatisfactory conclusions.³³

Despite his forward-thinking, democratic principles, Engel's project conceals a fashionably soft recapitulationism. Like so many Victorian musicologists he is progressive in sentiment but not in language. *Music of the Most Ancient Nations* (1864) demonstrates this, conceding modern primitive people aesthetic, but not developmental, equality: 'The power of creating an expressive melody is an innate gift which the most primitive savage may possess as fully as the most highly civilized man.'³⁴ Here as elsewhere Engel's conflicted anthropology continues to overshadow his work, so while readers are admonished to treat music and peoples equally in their own terms, their anthropological position is nevertheless fixed by a notional Great Chain of Musical Being. Justly released from unfair musical comparison with civilized music, primitive music nonetheless remains primitive and civilized music, civilized.

Engel's Victorian readers loved recapitulation, especially when supported by the developmental certainties of three Comtean stages. Accordingly, instruments of the Assyrians, like most cultures, evolve through three stages of drum, pipe and lyre while vocal music acquires increasingly distant musical intervals, beginning with the unison and fifth and ending with the seventh. Modern music recapitulates this collective musical experience, evolving from folk song to art music over the full expanse of time. In *An Introduction to the Study of National Music* (1866) folk song becomes the domain of – and best preserved in – lower, more primitive social echelons. In the context of civilization folk song is primitive; in

³³ Carl Engel, *Music of the Most Ancient Nations, Particularly of the Assyrians, Egyptians, and Hebrews; with Special Reference to Recent Discoveries in Western Asia and in Egypt* (London: William Reeves, 1864), 9.

³⁴ Engel, *Music of the Most Ancient Nations*, 21.

the context of primitive music, however, it is effectively civilized. Looking very much like Spencer's Great Musical Chain, Figure 2 reveals how primitive recapitulates civilized, making folk song a *living* musical fossil; for Engel and like-minded thinkers folk song *is* what it *represents*.

[Figure 2]

The allure of a-Darwinian recapitulation continued to permeate the 1870s and 1880s, chivvied along by the first English translations of arch-recapitulationist Haeckel. With these translations Spencer's Great Chain of Musical Being benefitted from an unexpected mid-Victorian boost by the publication of Haeckel's famous images of developmental trees. Visual images of the tree of life can be traced back to the sixteenth century, commonly depicted in the form of ladders and stairways bridging heaven and earth. From the late 1500s prototypical trees had begun to appear in scientific literature in the form of dividing keys or tables, and by the beginning of the nineteenth century, trees were becoming more recognizably tree-like. Lamarck offers a tantalizingly arboreal illustration in his *Philosophie zoologique* (1809), depicting the origin of animals branching into various directions. The first genuine tree follows in 1829 with Edward Eichwald's *Zoologia specialis*, and not long afterward in 1837 Charles Darwin would embrace the ontology of trees: 'Organized beings represent a tree *irregularly branched* some branches far more branched. – Hence Genera. – As many terminal buds dying as new ones generated.'³⁵ Further along in his Beagle Notebook B he would scrawl one of the most transformative images of nineteenth-century

³⁵ Charles Darwin, Beagle Notebook B (1837), B§21 §36, <http://darwin-online.org.uk/content/frameset?pageseq=38&itemID=CUL-DAR121.-&viewtype=side>, accessed 13/9/12.

science, an evolutionary tree headed ponderously with the words ‘I think’.³⁶ Darwin’s tree reached fruition in *The Origin of Species* (1859), evolving into a dynamically variable arrangement of stems and branches.³⁷

Like *The Origin of Species* itself, Darwin’s tree initially bore little fruit for musicological understanding, and was eclipsed by the more immediately accessible form of Haeckel’s magisterial oak. In 1866, believing that ‘Form arises from form of the ancestors and unfolds following prescribed stages’,³⁸ Haeckel portrays his *scala natura* as a tree branching in a way not unlike Darwin’s. But by 1874 his tree reflects the ladder-like steps of the Great Chain of Being, positioning man firmly at the top of natural order. Musicologists leapt on the idea, with prominent German expatriate and progressive music critic Francis Heuffer (1845–1889) visually paraphrasing it on the cover of *Richard Wagner and the Music of the Future: History and Aesthetics* (1874). Here in Figure 3, arising from Schubertian roots, a middle-trunk of Liszt and Schumann and the now lesser-known composer Robert Franz, Wagner nestles in the canopy just beneath the celestial firmament, enjoying a ‘bird’s-eye view from the sublime heights of genius’.³⁹

[Figure 3]

³⁶ Darwin, Beagle Notebook B, B§36.

³⁷ For more information on trees of life see Theodore W. Pietsch, *Trees of Life: A Visual History of Evolution* (Baltimore MD: The Johns Hopkins University Press, 2012), and also Mark A. Ragan, ‘Trees and Networks Before and After Darwin’, *Biology Direct* 4/43 (2009), 1–38.

³⁸ Ernest Haeckel (1867), cited in Jane Maienschein, ‘What is an ‘Embryo’ and How Do We Know?’, in David L. Hull and Michael Ruse, eds, *Cambridge Companion to the Philosophy of Biology* (Cambridge: Cambridge University Press, 2007), 332.

³⁹ Franz (Francis) Heuffer, *Richard Wagner and the Music of the Future* (London: Chapman and Hall, 1874), 71.

Heuffer was far from alone in his enthusiastic arborial recapitulationism.⁴⁰ Indeed, in addition to straight-forward trees, a-Darwinian Victorian musical culture was forested with recapitulatory ideas analogizing the four principal divisions of Haeckel's tree by implicitly preceding three Comtean stages with one of Spencerian origins. This practice is perhaps no better illustrated than in the writings of establishment composer and canonic popular historian C. Hubert H. Parry (1848–1918). Director of the Royal College of Music (1895–1918), Professor of Music at Oxford (1900–1908) and composer of the paradigmatically British hymn tune *Jerusalem*, Parry voiced from the mid-1880s what much of the musical nation actually thought: music progressed from simplicity to complexity as it became more civilized; each of its stages recapitulated the previous one; and it evolved in three stages preceded by a period of origination. Parry sets out his progressionist stall in *Summary of Musical History* (1884): 'to understand its [music's] qualities and characteristics, or to realise justly the light it throws upon the state of music in our own time, without tracing the conditions which led to it, and following the steps from the small and insignificant beginnings to the masterpieces which we regard as triumphs of our art . . . The study of the steps from elementary simplicity up to our complex condition of art shows how progression after progression became admissible by being made intelligible.'⁴¹ Slightly later he gives musical flesh to recapitulatory bones:

⁴⁰ For more evidence of trees in Victorian visual imagery see Zon, 'Recapitulation and the Musical Education of Victorian Children', 299–321.

⁴¹ C. Hubert H. Parry, 'On Some Bearings of the Historical Method upon Music', *Proceedings of the Musical Association* (1884), 3–4.

The basis of all music and the very first steps in the long story of musical development are to be found in the musical utterances of the most undeveloped and unconscious types of humanity, such as unadulterated savages and inhabitants of lonely isolated districts well removed from any of the influences of education and culture. Such savages are in the same position relation to music as the remote ancestors of the race before the story of the artistic development of music began; and through study of the ways in which they contrive their primitive fragments of tune and rhythm, and of the way they string these together, the first steps of musical development may be traced.⁴²

And in the unreconstructedly Spencerian introduction to Thomas Tapper's *Essentials in Music History* (1914), Parry defines music in three unapologetically Comtean, recapitulatory stages (admitting elsewhere a further 'stage' of musical origins): 'Mankind, like the individual, passes through *three stages* in his manner of producing and doing things. The first is unconscious and spontaneous, the second is self-critical, analytical, and self-conscious; and the third is the synthesis which comes of the recovery of spontaneity with all the advantages of the absorption of right principles of action . . . It is in the last phase that the greatest works of musical art are produced.'⁴³

In the memetically unconstrained environment of mid- to late-Victorian a-Darwinism, music historians generally sang from the same hymn sheet as Parry. Composer, historian and professor of music, variously at the Royal Academy of Music and Cambridge, George

⁴² C. Hubert. H. Parry, *The Art of the Evolution of Music* (London: Kegan Paul, Trench, Trübner, 1893), 51.

⁴³ C. Hubert H. Parry, introduction to Thomas Tapper, *Essentials in Music History* (1915), cited in Dwight Warren Allen, *Philosophies of Music History* (New York et al: American Book Co., 1939), 114.

Alexander Macfarren (1813–1887) replicates John Frederick Rowbotham (discussed below) replicating Engel replicating Spencer ultimately replicating Goddard in his *Music History Briefly Narrated and Technically Discussed* (1885),⁴⁴ and Frederick J. Crowest's *The Story of the Art of Music* (1902) does much the same.⁴⁵ Unreservedly nationalistic music historian and critic Henry Davey (1853–1929)⁴⁶ puts it this way in *The Student's History of Music* (1891, 2nd edition, 1894):

From the earliest periods of mankind, and certain of the lower animals, have shown an intense delight in hearing and producing sounds of a particular character . . . The most rudimentary condition of delight in the phenomena of sound may be daily observed in any child, who will continually blow a tin trumpet without the least idea of a tune; savages will do the same thing. The simple production of a sound is found to be pleasant.* The mighty structure of modern music has been developed from this embryotic perception.⁴⁷

Davey pays homage to Spencer by adapting the title of his well-known essay 'Developed Music' for his book's first chapter, 'Undeveloped Music', also citing his *Principles of Psychology* at the quotation's star. Even historians without a theoretical superstructure

⁴⁴ G. A. Macfarren, *Musical History Briefly Narrated and Technically Discussed with a Roll of the Musicians and the Time and Places of their Births and Deaths* (Edinburgh: Adam and Charles Black, 1885), 5.

⁴⁵ Frederick J. Crowest, *The Story of the Art of Music* (New York: McClure, Phillips & Co., 1904), 12, 15, 21.

⁴⁶ For more information on Davey, see Bennett Zon, "'Loathsome London': Ruskin, Morris, and Henry Davey's *History of English Music* (1895)", *Victorian Literature and Culture* 37/2 (2009), 359–75.

⁴⁷ Henry Davey, *The Student's History of Music* (London: J. Curwen & Sons Ltd., 1891; 4th edition, 1894), 1.

duplicate Spencer's Great Chain of Musical Being by insisting that music begins in sound, nature and, significantly, a human voice driven by emotion. Popular cultural, political and religious historian N. A. D'Anvers (aka Nancy R. E. Meugens Bell), writes for the recapitulatory multitude when he claims that 'Music *embodies* and *represents* [current author's italics] the emotional life of the mind and heart as no other art can: every shade of feeling finds it most natural and fitting expression in music.'⁴⁸ Organist of the German Chapel Royal at St James's Palace, F. Weber reiterates the same a-Darwinian idiom in *A Popular History of Music from the Earliest Times* (1891): 'From the oldest times the sense of hearing was held to be the most impressionable of all senses, as being the one by which the soul receives the quickest, liveliest, and deepest impressions . . . Music is the mother tongue of feeling, of the heart. Everyone is moved by its language.'⁴⁹

Pick-'n'-Mix Darwinism

Inevitably in such an imitative Spencerian environment new ideas struggled to compete with the Great Victorian Chain of Musical Being, but by the 1880s Darwin's theory had begun to attract more interest, not least because of his self-proclaimed musical acolyte, Edmund Gurney. The effect of Gurney's work was to galvanize curiosity (if criticism), and not long after *The Power of Sound* musicologists were dipping their toes hesitatingly into unfamiliar, Darwinian waters. At first their writings resembled a-Darwinism in its presumption of Spencerian truth, but once stuck into the theoretical rigour of Darwinian thought, Spencer's

⁴⁸ N. A. D'Anvers, *Elementary History of Music* (London: Sampson Low, Marston, Searle, & Rivington, 1882), 1.

⁴⁹ F. Weber, *A Popular History of Music from the Earliest Times* (London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd., 1891), 3.

views seemed strangely less scientifically verifiable. Poet, clergyman and armchair ethnomusicologist John Frederick Rowbotham (1859–1925) divides music history into three stages of drum, pipe and lyre, and goes that one extra Spencerian step further by adding an initial stage to three. *A History of Music* (1885–1887) is testimony to this 1+3 convention:

Ordinary Speech . . . swallows up the tone. But suppose we are much interested in what we are saying, we very soon abandon our mechanical tone then. In our anxiety to make every syllable tell, we employ every variety, every shade of tone; for we are backing up our words by our feelings, the head by the heart. And so the old language of feeling is unconsciously brought into requisition, and we draw on it more and more as our interest or excitement increases. Till at last when it comes to any highly impassioned utterances, we are all tone. Now this is the second branch of Speech, where the tone swallows up the word, we may call Impassioned Speech and we may well contrast it with Ordinary unimpassioned Speech in its musical aspect.⁵⁰

This describes in unrestrained Spencerian terms the preliminary stage of four when hypothesizing the development of non-Western music from purely vocal to instrumental music. Of the higher three, Comtean stages, Rowbotham concludes that ‘the 3 Stages in the development of Prehistoric Music, the Drum, Stage, the Pipe Stage, and the Lyre Stage . . . are to the Musician what the Theological, Metaphysical, and Positive are to the Comtist, or the Stone, Bronze, and Iron Ages to the archaeologist.’⁵¹ Accordingly, drums include rattles,

⁵⁰ John Frederick Rowbotham, *A History of Music*, 3 vols (London: Trübner and Co., 1885), vol. 1, 76.

⁵¹ Rowbotham, *A History of Music*, vol. 1, xx.

gongs, triangles, tam-tams, castanets, tambourines and cymbals; pipes, the flute, hautboy, clarinet, bassoon, horn, trumpet, trombone and bugle; and lyres, the harp, lyre, lute, guitar, violin, mandolin, dulcimer and piano.⁵² As illustrated in Figure 4, these are recapitulated across the expanse of non-Western peoples, culminating, transformationally, in what he calls, Nations of History.

[Figure 4]

Despite the recapitulational certitudes of his Great Chain of Musical Being, Rowbotham reads Darwin – selectively, and with suspicion – and concedes the possibility that he may be on to something:

Mr. Darwin finds the origin of all Instrumental Music in the Love Call. I shall contest myself with referring the Flute and the Pipe to that origin. And I would here point out, *bona pace*, a fact which he misses, which is, that to preface love-making by an overture of Instrumental Music, or to seek to move the passions of the female by such a means, or even to consider the wishes of the female at all in the matter implies a far higher degree of social refinement than we can imagine to exist at the early periods he speaks of – for his remarks would apply to the most rudimentary species of the drum form . . . At the same time there is this other point of difference between us: while he would make Instrumental Music – drumming namely on a tree, or a hollow substance – a lure *universally* employed by a man as a Love Call, I regard it in the form of a Flute or Pipe (for earlier I cannot go) – as a lure employed only by a certain few – and those, the

⁵² Rowbotham, *A History of Music*, vol. 1, xii.

guild of Artists; for I certainly cannot imagine any such condition of things as men playing Pipes all the world over to procure *wives*.⁵³

Volume 1 of Rowbotham's trilogy (poignantly Comtean in number of volumes and theoretical content: the perfect convergence of semantics and form; it *is* what it *represents*) ends with appendices summarizing his objections to Darwin. According to Rowbotham, Darwin supposes that in plumage, female birds compare deficiently to their male counterpart, and are consequently attracted to the male:

But has man any acuminate [sic] wing feathers which woman has not? Are not man and woman precisely even in the matter? And this being so, what attraction could woman find in the playing of those rude instruments, extemporised drums, that she could quite as easily perform upon, herself? If it could be proved that man has some exclusive personal advantage, which fits him for playing the rude extemporised instruments with which music began, the hypothesis might stand. But this cannot be shown.⁵⁴

Moreover,

Darwin is surely wrong when he says that 'the vocal organs were primarily used and perfect in the practice of this Love call,' whereas it is probably that not until man had fully tested and satisfied himself of the power of his voice, and become familiar with its

⁵³ Rowbotham, *A History of Music*, vol. 1, 54–5.

⁵⁴ Rowbotham, *A History of Music*, vol. 1, 188.

various tones, such a thing as the Love Call be conceived. It is narrowing the dominion of music too much to limit its origin to love, instead of the broader ground of all human emotion, which is the admirable theory of Theophrastus centuries ago, and which we prefer to maintain to day.⁵⁵

It is unimportant whether this is a calculated misreading of Darwin or simply a genuine theoretical impasse. What matters is the fact that Rowbotham descends from the premise of Darwin's theory for reasons as equally unsupportable – beliefs, if you will. The same intractable Spencerian spirit dominates *The Story of Music* (1889), a classic of pick-'n'-mix Darwinism by William James Henderson (1855–1937), an American critic and scholar published simultaneously in America and England. Without even mentioning either Darwin or Spencer, Henderson alternates freely between Darwinian and Spencerian language, often within the same sentence:

In a word, I shall endeavour to show how our music, having been originally a shell-fish, with its restrictive skeleton on the outside and no soul within, has been developed by the inevitable laws of evolution, through natural selection and the survival of the fittest, into something human, even divine, with the strong, logical skeleton of its science inside, the fair flesh of its God-given beauty outside, and the whole, like man himself, animated by a celestial, eternal spirit.⁵⁶

⁵⁵ Rowbotham, *A History of Music*, vol. 1, 189

⁵⁶ William James Henderson, *The Story of Music* (London and New York: Longmans, Green, & Co., 1889), 2.

On the surface Henderson's language smacks of what James Moore calls 'Darwinisticism', a school of thought 'applied to reconciliations of Darwinism and Christian doctrine that embodies non-Darwinian evolutionary theories'.⁵⁷ But this may be to misread Henderson in the same way Rowbotham misreads Darwin, for the phrase 'God-given beauty' does not necessarily connote religious faith but very probably *kunstreligion*, the Romantic spiritualization or sacralization of music. The same could be said of the work of Joseph Goddard.⁵⁸

Henderson sedulously avoids Judeo-Christian terminology. Beethoven, for example, made the symphony a "'cry of the human," and the obtrusiveness of the form, together with the individuality of the composer, is swallowed up in the universality of the divine thoughts'.⁵⁹ Though spiritualizing, Henderson's approach is also emphatically evolutionary: 'Since the violin form was reached there has been no further evolution. The fittest has survived.'⁶⁰ Without the edifice of denominational religion, Henderson's *Story* should be released to do what it says on the tin, exploring 'along what lines and by what processes our noble art has developed from a strictly scientific character to one personal and romantic; how, instead of being mechanically constructed according to arbitrary rules, it is now the embodiment of the utmost freedom of expression and the voice of the loftiest soul-poetry in the world.'⁶¹ Yet the combination of 'embodiment' and 'freedom of expression' sends a

⁵⁷ James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America: 1870–1900* (Cambridge: Cambridge University Press, 1979), 218.

⁵⁸ See Zon, "'Spiritual Selection": Joseph Goddard and the Music Theology of Evolution', 215–35.

⁵⁹ Henderson, *Story of Music*, 128.

⁶⁰ Henderson, *Story of Music*, 73.

⁶¹ Henderson, *Story of Music*, 1–2.

seemingly contradictory message, as does the use of 'scientific' and 'romantic'.

'Embodiment' implies scientific (i.e., pre-determined) recapitulation, while 'Freedom of expression' implies romantic (i.e., freely determined) 'natural selection'. As this suggests, Henderson's pick-'n'-mix evolutionism screens a residual belief in the Great Chain of Musical Being, and when the fittest survive (the violin, Wagner, etc.) his teleometer (to coin a phrase) positively jumps into action, like a Geiger counter registering radiation. While 'improvements in the instrument [the violin] were largely the result of demands made by music'⁶² (i.e., favourable variations were selected by the musical environment), the modern violin owes its form to five thousand years of recapitulatory development, from the ancient lyre to the Indian ravanastron, Egyptian rebab, the Mohammedan kermangeh, the Scandinavian guddock, the Anglo Saxon crowth or rotta, and the fithele, vitula or viol.

Unlike Henderson, the music philosopher J. Donovan appears to give Spencer and Darwin short shrift in *From Lyre to Muse* (1890), but scratch beneath the surface and you will find all the pick-'n'-mix trappings of late-century developmental and evolutionary language. At first Donovan presents himself as diametrically opposed to Spencer and Darwin; while acknowledging the value of Spencer and Darwin, they

failed even to take a single step in the direction . . . Besides scores of other difficulties, neither the *sex* nor the *speech* theories touch upon the central problem of the mystery of the development of music. There is no principle in or underlying their attempt at explanation which offers the shred of a reason why the step was taken from mere accidental sequences of tones, allowing all the varieties that emotional excitement could give them, to groups of tones selected according to a certain order of

⁶² Henderson, *Story of Music*, 73.

relationship, and governed by a note to which the whole selected group stands a distinctly perceptible relationship.⁶³

That unmistakable sentiment belies a roundly Spencerian (von Baerian/Lamarckian) template:

The first step in the evolution of musical delight was caused by the absorption of the mind by tones, and every step upward in musical development has been taken to increase that delight. And the only means by which it could be increased was by developing tonal relationship, presented rhythmically, into more and more deeply involved complexities. The desires of the music-maker found satisfaction only in 'feeling-out' developments of tonal relationship, in order to keep persistent or increase the old dime pleasure of rhythmic stimulation, in spite of the rapidly developing minds of men, which, of course, as they developed, it too more and more subtle tonal relations to absorb.⁶⁴

Donovan's rhythm is like Lamarck's giraffe, stretching its neck into canopy of tonality. In fact Donovan capitalizes the word 'Tonality' in recognition of its phylogenic status: 'The great witness for the secret aim of musical development, Tonality, that principle of attracting the mind by presenting to it a complex unity, no part of which is out of a perceptible relation with every other part, is also the ruling principle of harmony.'⁶⁵ Rhythm is also inextricably

⁶³ J. Donovan, *From Lyre to Music: A History of the Aboriginal Union of Music and Poetry* (London: Kegan Paul, Trench, Trübner, and Co., Ltd., 1890), 11–12.

⁶⁴ Donovan, *From Lyre to Music*, 20.

⁶⁵ Donovan, *From Lyre to Music*, 22.

bound up with the expression of religion because they share an early developmental position: 'That the music of the people's religion is best in result when it grows directly of the natural rhythmically stimulated music of the people, seems to be supported in a remarkable way by historical fact, in spite of the dimness of distant traditions.'⁶⁶

For Donovan harmony 'develops' but music 'evolves'. The distinction is important because, conveniently, the confusion allows him to sidestep crucial questions about form and function. According to Donovan the human mind

was impelled to the selection of musical tone-producing objects from amongst unmusical [objects], and later to the selection of objects producing tones in the most easily perceptible degrees of pitch-relationship, because the play-excitement, whether it connected itself with religious or social exulting, became intensified at the moment when the minds of the worshippers or rejoicers were absorbed by the tones conveyed simultaneously with rhythmic stimulus.⁶⁷

But while the evolution of music necessitates selection under the putative aegis of 'play-excitement', at no point is that mechanism discernible outside a developmental process. Neither is it clear on what basis or for what reason humans under the influence of 'play excitement' would select one musical object over another. And so despite the central feature of a selective mechanism, Donovan's 'play-excitement' theory really pays only lip service to evolution. The developmental chart he appends to his book more or less proves this. As shown in Figure 5, when inverted it assumes a character of the Great Chain of Being

⁶⁶ Donovan, *From Lyre to Music*, 161.

⁶⁷ Donovan, *From Lyre to Music*, 199.

not dissimilar to Haeckel's recapitulatory tree, being readily divisible into four stages: (1) an original stage up to the point of division 'Vocal exclamation drawn into the rhythmic and tonal mould. Song'; (2) division into sacred and secular; (3) 'Interfusion between Secular and Religious'; and (4) General Interfusion leading to abstract music.⁶⁸

[Figure 5]

The structural contradiction of an evolutionary apogee may undermine Donovan's theoretical integrity, but his belief in the rhythmic origins of music resonates throughout late Victorian musical culture. Following on from Engel, Rowbotham and Parry, for all of whom music begin paradigmatically with the Drum stage, ethnomusicologist Richard Wallaschek (1860–1917) espouses this same view in *Primitive Music* (1893) and, like Donovan, struggles to distinguish himself from Spencer. Wallaschek is, however, a more vocally committed Darwinian. Though uniformly unconvinced by Darwin's theory of musical origins, he accepts the mechanism of natural selection and the non-heredity of acquired characteristics and treats musical development through tradition and imitation. For him the drum is not a developmental stage but an historical instrument – a sophisticated one at that – which, as it so happens, follows the pipe. *Drumming*, he avers, may precede the pipe, but the Drum adamantly does not. Indeed, all primitive instruments and their music evolved not for reasons of predetermined development, but entirely for reasons of survival:

Primitive music . . . is an organizing power for the masses, the tie which enables the tribe to act as one body. It facilitates association in acting. Tribes which know how to

⁶⁸ Donovan, *From Lyre to Music*, 209.

keep time, which are accustomed to play at war and hunting, associate more easily, act better in case of need, and, since association accounts for something in the struggle for life, such tribes are better prepared for it; for this purpose the musical faculty is developed and trained. Thus the law of natural selection holds good in explaining the origin and development of music.⁶⁹

It is difficult to know if this bold declaration represents a tipping point for pick-'n'-mix Victorian musical culture. Like Gurney, Wallaschek sometimes attracted severe criticism for the strength of his Darwinian opinion, not least from Spencer himself,⁷⁰ and some Edwardian and later musicologists found his heterodox 'take' on musical origins disappointingly inconsistent. Certainly Wallaschek spilled a lot of ink defending himself against Spencer, but whether he or any other pick-'n'-mix Darwinian at the time fully expurgated that ghost and his rattling Chains is anyone's guess.

Conclusion

In an unassuming little piano primer called *The Child's Pianoforte Book* (1882), H. Keatley Moore summarizes a great deal of Victorian thinking when he claims that 'The development of the race is reproduced in the development of the child';⁷¹ 'all teaching', he insists, 'must proceed from the simple to the complex, from the concrete to the abstract, from the known

⁶⁹ Richard Wallaschek, *Primitive Music: An Inquiry into the Origin and Development of Music, Songs, Instruments, Dances, and Pantomimes of Savage Races* (London: Longmans, Green, and Co., 1893), 294–5.

⁷⁰ Herbert Spencer, 'On the Origin of Music', *Mind* 16/64 (Oct 1891), 535–7.

⁷¹ Spencer, 'On the Origin of Music'.

to the unknown'.⁷² Falling unquestionably into the a-Darwinian camp, Keatley Moore is noteworthy not simply for his unabashedly Spencerian pedagogy, but the germinal nature of his ideas. Buoyed by a thriving market in Froebel education, Keatley Moore docked Spencerian thought in Anglo-American musical education, as a book like Satis N. Coleman's *Creative Music for Children* (1922) suggests, and through it and other like-minded books, the creed of recapitulation seeped into post-Victorian educational practice. As late as the 1940s, developmental recapitulation still informed American music textbooks like Brooks and Brown's *Music Education in the Elementary School* (1946), and a compelling case could even be made for interpreting Suzuki's famous and enduring violin method as a-Darwinian, or at the very least neo-Lamarckian. Patently disregarding genetics, Suzuki claims that 'talent is not inherited',⁷³ likening progressive musical development to the education of a nightingale: 'If it has a good teacher, the infant bird will, through physiological transformation, learn from experience to produce tones as beautiful as those of its teacher . . . This is the law of nature in shaping and forming life's potential.'⁷⁴

Suzuki would not have been out of place in Victorian musical culture. His emphasis on 'talent education' would have resonated with social strategies of the time, and Spencer would have agreed with his guiding principle ('first character, then ability').⁷⁵ The

⁷² Henry Keatley Moore, *The Child's Pianoforte Book: Being a First Year's Course at the Pianoforte for The Home, The Kindergarten, and the School: With Upwards of Fifty Original Tunes and Songs* (London: W. Swan Sonnenschein & Co., 1882), 9.

⁷³ Shinichi Suzuki, *Nurtured by Love: The Classic Approach to Talent Education*, 2nd edition, trans. Waltraud Suzuki (Miami FL: Suzuki Method International, 1983), 9.

⁷⁴ Suzuki, *Nurtured by Love*.

⁷⁵ Suzuki, *Nurtured by Love*, 66.

astounding longevity of neo-Lamarckianism signals a substantial bequest to modern musical culture, and in some ways Victorian musical culture is no different than ours today. What is different, however, is the singularity of purpose which helped sustain a Spencerian world view – a synthetic philosophy relating all organic and non-organic matter in a unified evolutionary process. Spencer unified Victorian Britain in a way which Darwin simply did not, explaining, defending and nurturing its advancing developmental project. He also supplied Victorian musical culture with its central ideological default position. A-Darwinians like Carl Engel, Francis Heuffer, C. Hubert H. Parry and Henry Davey openly espoused his progressive, recapitulatory beliefs, flooding the musicological market with Spencerian thought, and the more philosophically circumspect, pick-'n'-mix Darwinians like Rowbotham, Henderson, Donovan and Wallaschek simply failed to produce a convincingly un-Spencerian alternative.

Why did Victorian musical culture cling so tightly to a Spencerian model of development? There is no simple answer, if what is meant by Victorian musical culture is a culture heavily favouring popular literary narrative to more arguably indigestible, academic forms of dissemination. Like fiction, musicology dispensed its knowledge and values in discernibly linear stories, and those stories – principally about composers and their compositions – relied upon development and recapitulation in a way that Darwinian evolution could never satisfy. Their role was to represent the guiding principle behind the genius of great musical composers; as Carlyle insists, geniuses by necessity must be seen to recapitulate history: 'all things that we see standing accomplished in the world are properly the outer material result, the practical realisation and embodiment, of Thoughts that dwelt in the Great Men sent into the world: the soul of the whole world's history, it may justly be

considered, were the history of these.⁷⁶ Darwin may have deprived Victorian culture of its ability to interpret Great Men, but the Great Chain of Being lived on in the Victorian historiographical hothouse, and musicology is proof of its existence well into the twentieth century.

A subsidiary reason Victorian musical culture embraced Spencer while resisting Darwin may have something to do with music itself. The technical language historians use to describe music – what is commonly known as music theory – evolved in the eighteenth century from the same morphological pool as recapitulation, doubtless reflecting the developmental nature of musical composition. Today we denote the structure of a sonata, for example, by referring to its themes (usually two distinct themes), development (when themes are varied) and the recapitulation (when themes return at the end), and although the subject of much debate amongst theorists in classical music this structure is relatively sacrosanct. By the turn of the twentieth century, as compositions increasingly shed predetermined forms in favour of more organically shaped structures, the famous theorist Heinrich Schenker (1868–1935) would codify recapitulatory theory within analytical practice as a means of highlighting unity within increasingly destabilized forms. Nicholas Cook explains:

if human history is to be understood as the unfolding of *Geist*, so is the temporal evolution of an individual piece of music. When Schenker says that ‘every succession of tones, every melody, carries its own harmonic credo within itself’ . . . he is already

⁷⁶ Thomas Carlyle, ‘Lecture 1, The Hero as Divinity’, in *On Heroes, Hero-Worship, and the Heroic in History* (London: J. M. Dent, and New York: E. P. Dutton & Co., 1841/1908), 239.

anticipating what he said at the beginning of chapter 1 of *Der Freie Satz*, 'The inner law of origin accompanies all development and is ultimately part of the present.'⁷⁷

In musical terms, what Schenker calls the horizontal 'chord of Nature' supplies the ontogeny for which the composition as a whole is the vertical phylogeny. William Drabkin describes it as musical content 'created by an unfurling of the tonic triad'.⁷⁸ Unsurprisingly, Schenker's influence in Victorian and post-Victorian musicology is extensive.⁷⁹

In many respects it is not surprising that German thought should typify late Victorian sentiment, especially as it plays such a key role in the formation of Spencer's musical ideas. Through Spencer, it ventilated recapitulational ideas, and girded by developmental convictions of the Great Chain of Being musicology, absorbed and adapted them in a multitude of ways. Indeed, all the intellectual tools of the musicologist – history, biography, analysis, psychology, philosophy, education and so on – collectively produced an atmosphere in which neither a-Darwinism nor pick-'n'-mix Darwinism could produce a satisfactory alternative to Spencer. Indeed, post-Darwinian musicology seemed singularly unable to think outside the Spencerian box. Perhaps it comes down to the fact that neither Spencer nor Darwin could produce adequate scientific evidence for their theory of musical origins, and in the absence of evidence Victorians simply went with what they liked most – a

⁷⁷ Nicholas Cook, *The Schenker Project; Culture, Race, and Music Theory in Fin-De Siècle Vienna* (Oxford: Oxford University Press, 2007), 34.

⁷⁸ William Drabkin, 'Heinrich Schenker', in Thomas Christensen, ed., *The Cambridge History of Western Music Theory* (Cambridge: Cambridge University Press, 2002), 818.

⁷⁹ Catherine Dale, *Music Analysis in Britain in the Nineteenth and Early Twentieth Centuries* (Aldershot: Ashgate, 2003), 200–205 *passim*.

theory that *is* what it *represents*, the perfect convergence of semantics and form, the ontogeny of the individual and the phylogeny of the species. Perhaps for future scholars the answer lies in researching outside the popular musical mainstream, in the more rarefied, a-linear academic literature produced within the gradually professionalizing Victorian musicological establishment, or in compositional practice and the evolutionary attitudes of up-and-coming composers like Vaughan Williams. Whatever the answer, and wherever it lies, Victorian musical culture, for the time being at least, *is* what it *represents*: a study in the survival of recapitulation and the struggle of evolution in the Great Chain of Musical Being.

FIGURES

Figure 1. Spencer's Great Chain of Musical Being.

Figure 2. Engel's Great Chain of Musical Being.

Figure 3. Heuffer visually paraphrasing Haeckel.

Figure 4. John Frederick Rowbotham 1+3 stages of musical development.

Figure 5. Donovan's Great Chain of Musical Being. J. Donovan, 'Play Excitement of the Body', *From Lyre to Music: A History of the Aboriginal Union of Music and Poetry* (London: Kegan Paul, Trench, Trübner, and Co., Ltd., 1890), 209.

Zon Captions

Figure 1. Spencer's Great Chain of Musical Being, based on 'The Origin and Function of Music' (1857).

Figure 2. Engel's Great Chain of Musical Being, based on *The Music of the Most Ancient Nations* (1864).

Figure 3. Heuffer visually paraphrasing Haeckel. SPLIT THESE UP AND GIVE THE INFO YOU HAVE WITH THE PICTURE HERE AND DELETE FROM THE PICTURE. IF THE POINT IS TO COMPARE ALL THREE TO SHOW SIMILARITIES THEN WE WILL HAVE TO THINK OF HOW TO DO THAT WITHOUT PUTTING IT ALL INTO ONE DOCUMENT.

Rather than divide them up, I would suggest we ask CUP if they can publish these side by side in landscape, and if so whether they want them as three separate images. I can always supply them later.

Figure 4. John Frederick Rowbotham 1+3 stages of musical development, based on *A History of Music* (1885-87)

Figure 5. Donovan's Great Chain of Musical Being. J. Donovan, 'Play Excitement of the Body', *From Lyre to Music: A History of the Aboriginal Union of Music and Poetry* (London: Kegan Paul, Trench, Trübner, and Co., Ltd., 1890), 209. TAKE THE SOURCE OUT FROM THE ILLUSTRATION AS YOU HAVE IT HERE. EXPLAIN WHERE THE GRID CAME FROM.

This is my diagrammatic interpretation of Donovan's Great Chain of Musical Being mapped onto his chart as cited.

Figure 1. Spencer's Great Chain of Musical Being

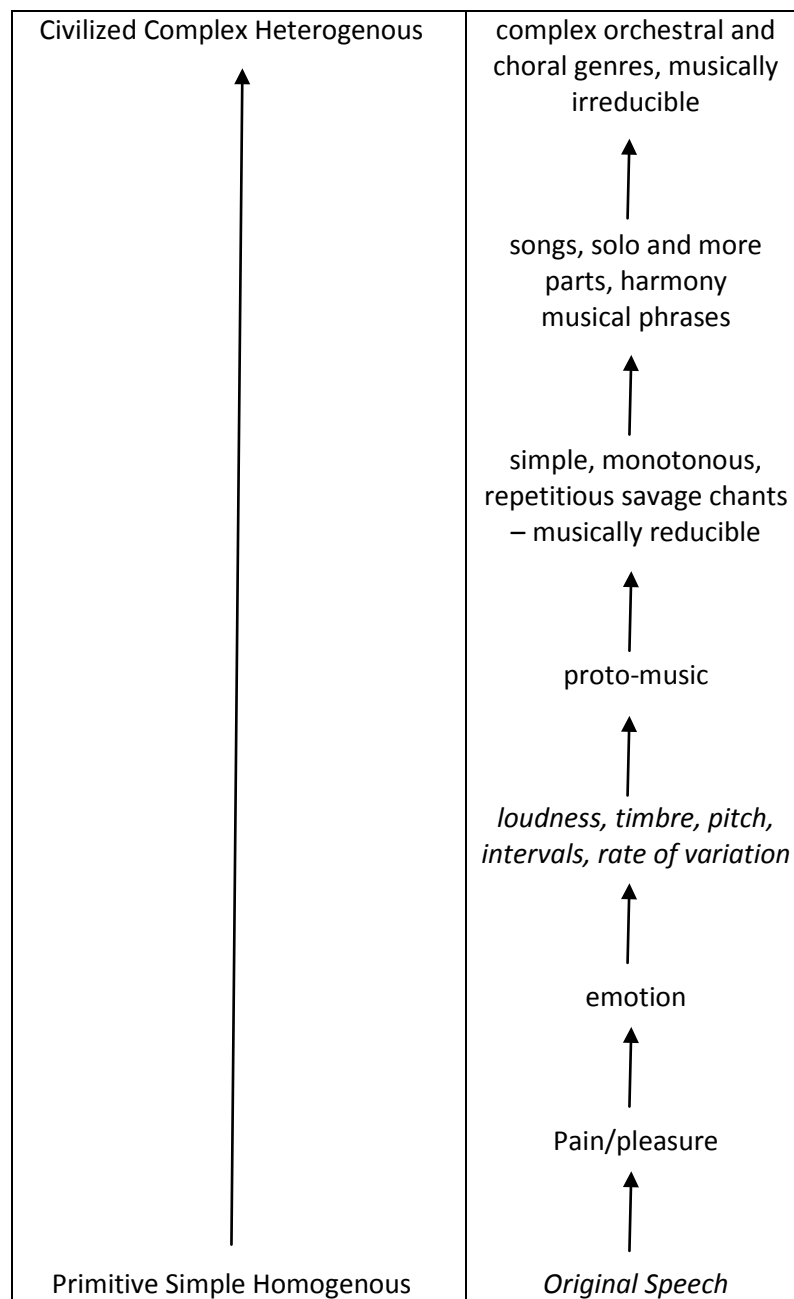


Figure 2. Engel's Great Chain of Musical Being.

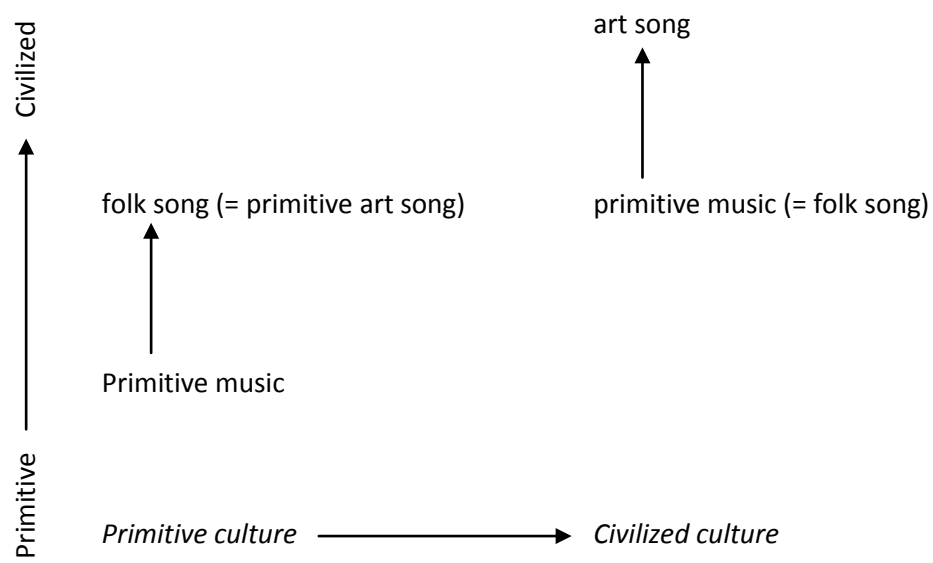
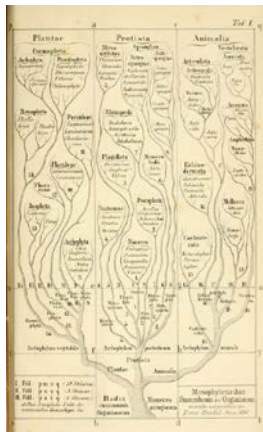
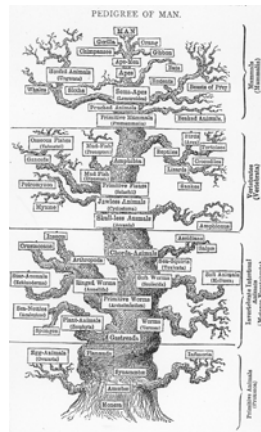


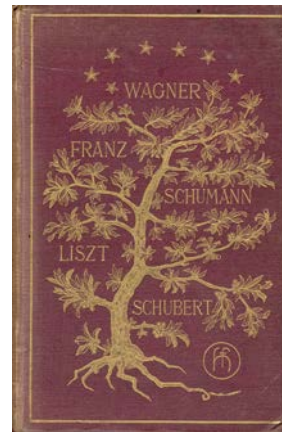
Figure 3. Heuffer visually paraphrasing Haeckel.



Ernst Haeckel,
Generelle Morphologie der
Organismen
*allgemeine Grundzüge der
organischen Formen-
Wissenschaft, mechanisch
begründet durch die von
Charles Darwin reformirte
Descendenz-Theorie* (1866)



Ernst Haeckel,
The Evolution of Man (1879),
originally from
Anthropogenie (1874)



Franz Hueffer, cover to *Richard
Wagner and the Music of the
Future: History and Aesthetics*
(1874).

Figure 4. John Frederick Rowbotham 1+3 stages of musical development.

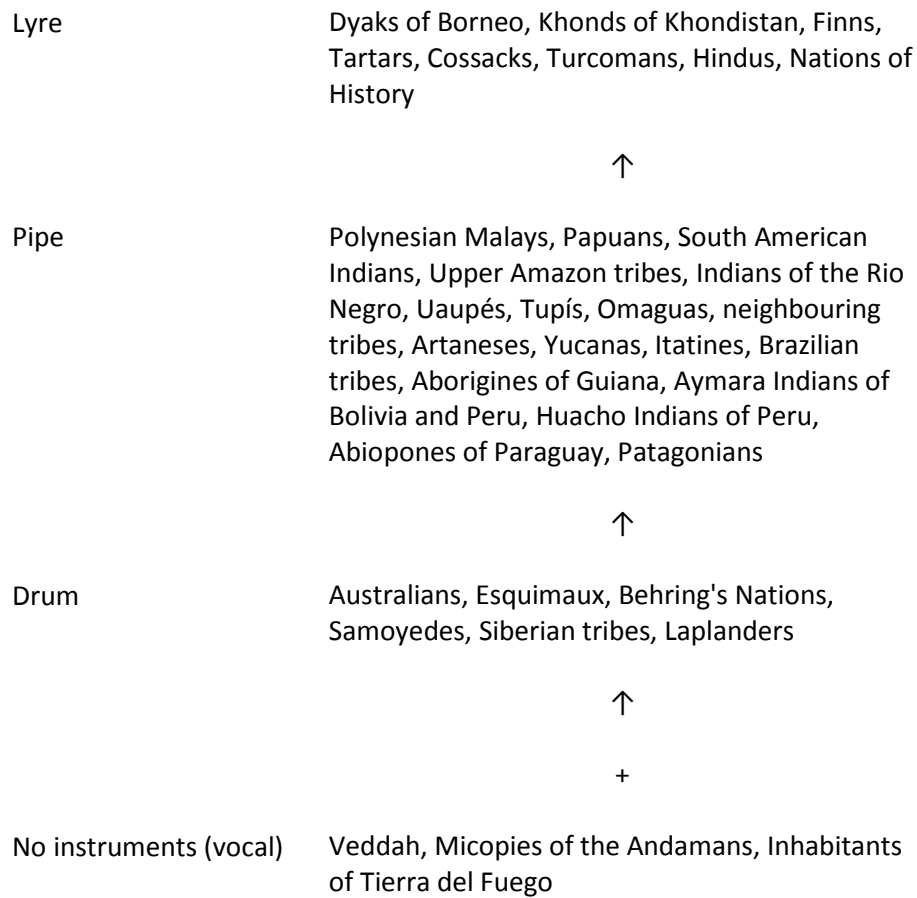


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